

ABSTRACT OF THE DISCLOSURE

A semiconductor laser device includes a tailored index single mode power amplifier. A high-power laser system can be produced by connecting several of the tailored index single mode power amplifiers in parallel. In an exemplary case, a phase shifting device can be optically coupled to each of the tailored index single mode power amplifiers; the phase shifting devices can be controlled to ensure that the laser beams output by the tailored index single mode power amplifiers are both phase aligned and wavefront matched.

BEST AVAILABLE COPY